

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Safety and Enforcement Division
Rail Transit Safety Branch

Resolution ST-174
June 11, 2015

RESOLUTION

**RESOLUTION ST-174 GRANTING SANTA CLARA VALLEY
TRANSPORTATION AUTHORITY VARIANCE FROM
GENERAL ORDER 143-B, SECTION 9.06 (c) (2) CLEARANCES**

SUMMARY

This resolution grants the Santa Clara Valley Transportation Authority a variance to General Order 143-B, Section 9.06 (c) (2), side clearances requirements, to accommodate two proposed signal cases "SC050 and SC059" for their Mountain View Line Double Track Phase 2 Project.

PROJECT DESCRIPTION

The Santa Clara Valley Transportation Authority's (SCVTA) Mountain View Double Tracking Project is adding a second light rail track between Mountain View Transit Center and Whisman Station. Phase one will add about 1,400 feet of light rail track by extending the existing storage track to just west of State Route (SR) 85. In addition a new track will be constructed. In order to accommodate the second set of light rail tracks, the existing Caltrain commuter rail tracks will need to be re-aligned between the existing Evelyn Station and SR 237.

Phase two extends the second set of light rail tracks by about 3,000 feet from SR 85 to Whisman Station. This work will require permanent closure and removal

of the Evelyn Light Rail Station, which is situated between Caltrain tracks and current single VTA track.

BACKGROUND

By a letter dated February 4, 2015, SCVTA requested a variance to General Order (GO) 143-B, Section 9.06 (c) (2) side clearances requirements, to accommodate two proposed signal cases "SC050 and SC059" for the SCVTA's Mountain View Line Double Track Phase 2 Project. As a part of SCVTA's Light Rail Efficiency program to speed up service and increase ridership, SCVTA is constructing a pocket track and adding a second track along a one-mile segment at the end of the line in the City of Mountain View. The alignment of this one-mile segment of light rail track, adjacent to Caltrain commuter rail tracks between Central Expressway at-grade crossing and the Mountain View Station, is considered semi-exclusive. Therefore, GO 143-B, Section 9.06 (c) (2) is applicable. SCVTA is requesting a variance to GO 143-B section 9.06 as described below.

GO 143-B Section 9.06:

b. All clearances shall be measured from the dynamic envelope of the outermost surface of the largest vehicle on tangent track. The spacing of tracks and structures shall be increased proportionately for curved track to provide the minimum clearances specified in this part at all locations. Minimum clearances shall be such that no contact can take place due to any condition of design wear, loading or anticipated failure such as air spring deflation or normal lateral vehicle motion.

c. The minimum side clearance to obstructions higher than eight (8) inches above top-of-rail and the clearances between LRVs and streetcars located on parallel tracks used exclusively for light rail transit operations shall be governed by the following requirements:

*(2) at locations and in areas where passengers, employees, and other persons are normally prohibited while trains are in motion, the minimum clearance shall be **eighteen (18) inches**. Fixed wayside structures less than five (5) feet in length (e.g. catenary and signal poles, switching equipment) shall be excluded from this requirement provided approved measures are taken to give warning of restricted clearances;*

SIDE CLEARANCE

Based on SCVTA's largest rail vehicle, the dynamic envelope of the outermost surface of the largest rail vehicle on tangent track is 4'8" from the track centerline. In order to meet the specific clearance requirements of this section of GO 143-B and provide 18" of clearance, the signal cases could be located no closer than 6'2" from the centerline of the nearest track. SCVTA proposes to place two 34" x 116" signal cases (SC050 and SC059) at 5'7" from the centerline of the nearest SCVTA track, which is 7" less than the 6'2" minimum horizontal clearance calculated based on GO 143-B (4'8" + 18"), and which would result in a clearance of 11". Additionally, the case handles protrude 3" from the face of the case reducing the length further to 5'4" from the centerline of the nearest SCVTA track and resulting in an 8" minimum horizontal clearance.

LENGTH OF CASES

GO 143-B, Section 9.06 (2) excludes fixed wayside structures less than 5' in length from the minimum clearance requirement, provided approved measures are taken to give warning of restricted clearances. However, these signal cases exceed those criteria and thus a variance is requested. The proposed signal cases "SC050" and "SC059" are 116" in length (9'-8"). A shop drawing of the signal case is attached with further detail.

SCVTA indicates that the signal cases need to be located in this vicinity because the right-of-way at these two locations will not allow for alternative placement. The cases need to be nearby the facilities they operate, and both locations, and for 300 feet in both directions along the tracks, are constrained by retaining walls and the Central Expressway on the north and a Caltrain retaining wall on the south. Staff has confirmed the SCVTA assertions and absence of viable alternatives.

As mitigation for the impaired clearances, SCVTA will install approved warning signs to provide warning of restricted clearance. Also, when inspection or maintenance of these cases is required, a work zone will be set up with full stoppage of one track, and GO 175 series applies to both tracks simultaneously

since any work even on one side of these signal cases places the maintainer/inspector within six (6) feet of a rail on both tracks.

Enclosed are exhibits illustrating the plan view and section for the proposed placement of Cases SC050 and SC059. These locations will have no public access in the future, as Evelyn pedestrian tunnel and Evelyn Station will be closed permanently prior to construction commencement. On the north, a retaining wall with fence and grade differential effectively isolate the LRT right-of-way from Central Expressway. Central Expressway has no pedestrian access today. The 2040 Expressway Plan and County staff confirms no pedestrian access is planned in the future adjacent to the rail corridor. On the south, two Caltrain tracks and two fences effectively prohibit public access to the SCVTA right-of-way.

Refer to following attachments:

- Plan View and Section for Proposed Signal Case Placement (SC050)
- Plan View and Section for Proposed Signal Case Placement (SC059)
- Shop Drawing for Signal Case
- SCVTA variance letter dated February 4, 2015

DISCUSSION

Staff has reviewed SCVTA's request and believes that granting the variance will not have an adverse effect on the system safety.

NOTICE

On May 13, 2015, SCVTA's variance request was published on the Commission's Daily Calendar.

COMMENTS

The draft resolution of the Rail Transit Safety Branch in this matter was mailed in accordance with Section 311 of the Public Utilities Code and Rule 14.2(c) of the Commission's Rules of Practice and Procedure. No comments were received.

FINDINGS

1. By a letter dated February 4, 2015, SCVTA requested a variance to GO 143-B, Section 9.06 (c) (2) side clearances requirements to accommodate two proposed signal cases "SC050 and SC059" for the SCVTA's Mountain View Line Double Track Phase 2 Project.
2. The proposed signal cases "SC050" and "SC059" are 116" in length (9'-8").
3. GO 143-B, Section 9.06 (c) (2) side clearances requirements will not be achieved; therefore, SCVTA seeks this waiver.
4. Staff concurs there is an absence of viable alternative locations.
5. SCVTA will install approved warning signs to provide warning of restricted clearance.
6. When inspection or maintenance of these cases is required, a work zone will be set up by SCVTA with full stoppage of one track.
7. Since any work on these signal cases will take place within six (6) feet of a rail on both tracks simultaneously, GO 175 series protections must be provided for both tracks when any work is performed.
8. The Evelyn pedestrian tunnel and Evelyn Station will be closed permanently prior to construction commencement.
9. The proposed signal case locations have no existing or planned public access.
10. On the north, a retaining wall with fence and grade differential effectively isolate the SCVTA right-of-way from Central Expressway.
11. A 5 feet high fence (Type CL 5) will be placed between the Caltrain and SCVTA tracks.

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12. SCVTA and Rail Transit Safety Branch staffs are in agreement that the proposed mitigation measures will provide an equivalent level of protection and will not impact public safety.

THEREFORE, IT IS ORDERED THAT:

1. Santa Clara Valley Transportation Authority request for a variance to General Order 143-B, Section 9.06 (c) (2), side clearances requirements, to accommodate two proposed signal cases, "SC050 and SC059," for their Mountain View Line Double Track Phase 2 Project is granted.
2. Santa Clara Valley Transportation Authority shall install and maintain signs warning of the signal cases' restricted clearances.
3. Santa Clara Valley Transportation Authority shall require a work zone to be set up with full stoppage of any vehicle movement on the track on the side of the signal case where maintenance is being performed.
4. Santa Clara Valley Transportation Authority's maintenance plans for these signal cases shall state requirements that personnel must comply with the respectively applicable sections of the General Order 175 series for both tracks when any maintenance is performed.
5. This resolution is effective today.

I certify that this resolution was adopted by the Public Utilities Commission at its regular meeting held on June 11, 2015. The following Commissioners voting favorably thereon:

TIMOTHY SULLIVAN
Executive Director

ATTACHMENTS

